**Army Regulation 385-95**

**Safety**

# Army Aviation Accident Prevention

**Headquarters**
**Department of the Army**
**Washington, DC**
**10 December 1999**

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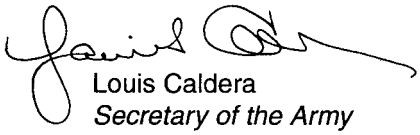
*__Army Regulation 385-95__

**Effective 10 January 2000**

**Safety**

# Army Aviation Accident Prevention



Louis Caldera
*Secretary of the Army*

**History.** This printing publishes a revision of this publication. Because the publication has been extensively revised, the changed portions have not been highlighted.

**Summary.** This regulation updates guidance to Army aviation commands in protecting the force from aviation accidents. This regulation implements portions of DOD Instruction 6055.1.

**Applicability.** This regulation applies to the Active Army, the Army National Guard, the U.S. Army Reserve, and the Department of the Army civilian employees. Applicable requirements of this regulation will be made a part of the safety programs of U.S. Government contractors engaged in any aspect of aviation when the U.S. Government has assumed the risk liability for loss or damage. During mobilization, the proponent may modify chapters and policies contained in the regulation.

**Proponent and exception authority.** The proponent for this regulation is the Director of Army Staff. The proponent has the authority to approve exceptions to this regulation that are consistent with controlling law and regulation. The Director of Army Staff may delegate this approval authority, in writing, to a division chief under his/her supervision within the proponent agency who holds the grade of colonel or the civilian equivalent.

**Army management control process.** This regulation is subject to the requirements of Army Regulation (AR) 11-2. It contains internal control provisions and does contain a checklist for conducting internal control review.

**Supplementation.** Supplementation of this regulation, and establishment of command or local forms are prohibited without prior approval from Headquarters, Department of the Army (DACS-SF), Washington, DC 20310-0200.

**Suggested improvements.** Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commander, USAAVNC (ATZQ-S), Fort Rucker, AL 36362-5000.

**Distribution.** This publication is available in electronic media only and is intended for command levels A, B, C, D, and E for Active Army, Army National Guard, and United States Army Reserve.

***** This regulation supersedes Army Regulation 385-95, 20 May 1991.

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# *Summary of Change*

Army Regulation 385-95
Army Aviation Accident Prevention

This revision—

- Defines responsibilities for the integration of the safety component of protecting the force into aviation operations. (Cited in para 1-4.)
- Eliminates the requirement for a written commander's accident prevention program plan. (Cited in para 1-6.)
- Requires the commander to establish a written safety philosophy. (Cited in para 1-6.)
- Requires safety goals, objectives, and priorities to be included in quarterly training guidance. (Cited in para 1-6.)
- Defines requirements for safety related programs and processes used by the safety staff. (Cited in para 1-6.)
- Integrates the safety risk management process into aviation operations and safety program administration. (Cited in paras 2-1 through 2-16 and paras 3-1 through 3-7.)

## Chapter 1
## General

### 1-1. Purpose

*a.* To establish the safety component of protecting the force as an integral part of Army aviation training and operations.

*b.* To provide responsibilities, policies, and duties for the integration of safety and risk management into existing command processes.

### 1-2. References

Required and related publications, and prescribed and referenced forms are listed in appendix A.

### 1-3. Explanation of abbreviations and terms

Abbreviations and special terms used in this regulation are explained in the glossary. The term commanders is used throughout this regulation and applies to all levels of command and supervision.

### 1-4. Responsibilities

*a*. *The Secretary of the Army.* The Secretary of the Army, or authorized representative, reserves all authority and final approval for DA aviation matters and has the responsibility for operational support airlift (OSA) management.

*b*. *The Assistant Secretary of the Army (Installations and Environment) (ASA(I&E)).* The ASA(I&E) is the principal adviser and assistant to the Secretary of the Army for the Army aviation safety component of protecting the force.

*c*. *The Assistant Secretary of the Army (Financial Management and Comptroller) (ASA(FM&C)).* The ASA(FM&C) prepares and publishes Army cost comparison rates and Army aircraft reimbursement rates annually and provides cost analysis support to OSA management and other agencies on request.

*d.* *The Chief of Staff, Army.* The Office of the Chief of Staff, Army approves Army-wide grounding of an entire mission, type, design, and series (MTDS) fleet of aircraft. This authority applies to safety of flight (SOF) and aviation safety action messages (ASAM).

*e.* *The Deputy Chief of Staff for Operations and Plans (DCSOPS).* The DCSOPS has staff responsibility for Army aviation, including—

(1) Authorizing selected waivers, limited to those items referenced in paragraph 1-7, AR 95-1.

(2) Reporting Army flying hour program execution during the quarterly program performance and budget execution review.

*f.* *The Deputy Chief of Staff for Logistics (DCSLOG).* The DCSLOG has staff responsibility for—

(1) Approving SOF and ASAM messages.

(2) Serving as chairperson for the Army Safety Action Team (ASAT).

(3) Aircraft weight and balance.

(4) Aviation life support.

(5) Non-standard aircraft.

*g.* *The Deputy Chief of Staff for Personnel (DSCPER).* The DSCPER will—

(1) Ensure that system safety is integrated into materiel development and acquisition phases through the manpower and personnel integration (MANPRINT) program.

(2) Ensure that safety concerns and issues on Army materiel are included in MANPRINT presentations at the Army Systems Acquisition Review Council (ASARC).

(3) Promote aviation safety and accident prevention, and recommend aviation safety risk areas as candidates for future research and studies by the U.S. Army Research Institute (ARI) and/or by the U.S. Army Research Laboratory Human Research Engineering Directorate (HRED).

*h. The Director of Army Safety.* The Director of Army Safety (DASAF) manages the Army aviation accident prevention program and is responsible for Army-wide aviation safety functions cited in AR 10-88, including, "U.S. Army Safety Center." The DASAF will—

(1) Collect information from aviation accident investigations conducted by the United States Army Safety Center (USASC) and Army units.

(2) Conduct research, analysis, and studies of aviation accident information.

(3) Develop aviation risk control options for commanders.

(4) Assist in implementing selected control options and in evaluating their effectiveness.

*i. Major Army command (MACOM) commanders.* MACOM commanders establish, in writing, policy for risk decision authority level.

(1) The Commander, Training and Doctrine Command (TRADOC), will--

*(a)* Integrate the safety component of protecting the force into aviation doctrine, training, leadership development, organizational design, materiel requirements, and soldier issues (DTLOMS).

*(b)* Monitor the safety performance of aviation MTOE and table of distribution and allowances (TDA) units, and school products Army-wide.

*(c)* Develop aviation safety lessons learned and countermeasures.

(2) The Commander, Forces Command (FORSCOM), will integrate the safety component of protecting the force into Army force projection plans and procedures.

(3) The Commander, Army Materiel Command (AMC), will--

*(a)* Integrate the safety component of protecting the force into Army plans, procedures, and criteria to sustain the force.

*(b)* Eliminate hazards in aviation equipment, materiel systems, and science and technology and inform users of the hazards associated with equipment designs, maintenance, and operation.

*(c)* In conjunction with CG TRADOC, inform HQDA of the high risks associated with the systems it provides.

(4) All MACOM commanders with assigned aviation activities and/or units will maintain current authorized full-time positions for qualified aviation safety officers (ASO) (CW5), or qualified aviation safety technicians, on the headquarters safety office staff. However, MACOM commanders with limited aviation assets, (12 or fewer aircraft), may assign ASO responsibilities as an additional duty to an ASO-qualified operations staff aviation/action officer.

*j. Commanders.* Commanders will--

(1) Effectively manage risk to minimize the accidental loss of aviation personnel and equipment.

(2) Maintain current authorized full-time positions for qualified ASOs at MACOMs, corps, installations or facilities that support aviation activities, and aviation unit levels (regiment/brigade/group, battalion/squadron, company/troop, detachments and comparable-size activities).

(3) Appoint and rate the ASOs at regiment/brigade/group level and below.

*(a)* ASOs are not assigned duties that are not related to the safety component of protecting the force.

*(b)* Units that do not have table of organization and equipment (TOE)/TDA-authorized ASO positions will utilize the expertise of the next higher authorized ASO in the chain of command. Additionally, commanders not authorized full-time ASOs by the TOE/TDA will appoint additional-duty ASOs.

*(c)* Additional-duty ASOs must be graduates of the USASC Aviation Safety Officer Course. Safety-trained non-commissioned officers (NCO) or qualified individuals will be appointed by unit commanders, in writing, to assist the ASOs.

*(d)* Commanders will support the resourcing of adequate computer equipment to allow ASOs to perform assigned duties more efficiently.

*k. Tenants.* Tenants are responsible for coordinating with installation commanders concerning aviation safety responsibilities, functions, and funding. Procedures are properly described in host/tenant agreements.

*l. Command safety director (installation and MACOM level.* The command safety director is the commander's direct safety representative and is responsible for the overall safety management within the command. Duties include providing for safety training, safety education and promotion, accident reporting, analysis, statistics, and recommending corrective or preventive actions to the commander. The safety director will also ensure that safety is integrated into all activities within the command.

**1-5. Policy**

Aviation operations involve inherently higher risk (higher probability of accidents and more severe consequences) than most ground operations. Historically, when deployed to combat theaters, Army aviation has suffered more losses to accidents than to enemy action. Aviation accidents in combat are typically the same type experienced in peacetime. Because of this, commanders of units involved in aviation operations must emphasize the safety component of protecting the force. Commanders, supervisors, and safety managers at all levels must comply with certain policies regarding the aviation safety component for protecting the force. Commanders will--

*a*. Ensure that safety is a principal element in all aviation operations.

*b.* Apply risk-management procedures in each phase of the training-management cycle (Field Manual (FM) 25-101) to identify hazardous conditions and correct shortcomings responsible for these conditions. Aircraft accidents are caused by below-standard performance of unit functions (for example, battlefield operating systems) due to human factors, material failure, or inadequate precautions for environmental factors. Hazardous conditions are caused by shortcomings in the following areas:

(1) *Support.* Failure to provide adequate equipment, personnel, services, facilities, or maintenance.

(2) *Standards.* Failure to provide practical guidance and standards of task performance.

(3) *Training.* Failure to provide awareness of, or the means to achieve, existing standards.

(4) *Leadership.* Failure to enforce known standards.

(5) *Individual.* Failure of the individual to follow known standards.

*c.* Employ risk management to ensure that maximum combat power is available for use at the decisive point and time for successful operations. Combat power is generated by soldiers and machines performing battlefield-operating-system functions in the operational environment. Hazards not identified and controlled during operations can cause accidents and unnecessarily deplete combat power. During planning and execution of aviation missions, commanders will integrate risk-management procedures into the decision-making process (FM 101-5) to identify and control mission, enemy, terrain/weather, troop, and time (METT-T) hazards. Mission after action reviews (AAR) will assess the effectiveness of risk management and safe performance.

*d.* Integrate the requirement for protecting the force with the demand for realistic training and mission readiness. A high degree of mission effectiveness is achieved through systematic management of inherent mission risks. The concept and the systematic process of risk management must be understood, promoted, and applied by leaders at each level. Three principles of risk management are--

(1) Integrating risk management into mission planning, preparation, and execution.

(2) Making risk decisions at the appropriate level in the chain of command.

(3) Accepting no unnecessary risks.

## 1-6. Duties

*a. Commanders.* All commanders will—

(1) Ensure compliance with Department of Defense (DOD), Department of the Army (DA), Occupational Safety and Health Administration (OSHA), National Fire Protection Association (NFPA), and Environmental Protection Agency (EPA) requirements. Commanders will establish other requirements as necessary for protection of personnel and equipment under their control.

(2) Establish a written commander's safety philosophy.

(3) Develop current safety goals, objectives, and priorities and include them in quarterly training guidance (annually for Reserve component).

(4) Integrate risk controls into standing operating procedures (SOP) (A stand-alone written commander's accident prevention plan is no longer required.) and ensure that written SOPs exist for all functional areas and for all operations within the command. SOPs will include—

*(a)* Risk-management procedures and responsibilities for training and operations.

*(b)* Risk controls for hazards most frequently experienced.

*(c)* Command level authorized to accept each level of risk, (low, moderate, high, and extremely high).

*(d)* Pre-accident plans, including immediate actions, investigation procedures (See DA Pamphlet (PAM) 385-40.), reporting (See AR 385-40.), and corrective action responsibilities. (See App C for sample pre-accident plan.)

*(e)* Procedures and responsibilities for safety-related programs. (See chap 2.)

(5) Conduct risk assessment during the planning phase of training, as part of the commander's training assessment, to identify shortcomings (hazards) and to develop actions to eliminate or control them.

(6) Ensure that risk-management procedures are integrated into the decision-making process to identify and control hazards during the execution phase of training and during operational missions.

(7) Ensure that the unit's risk-management and safety performance is systematically observed and assessed during training and operations.

(8) Ensure sufficient information is provided during AARs to determine if the performance met the commander's safety guidance (goals, objectives, and priorities).

(9) Ensure that corrective actions/controls to improve performance are identified and included in the training management cycle and unit SOP.

(10) Clearly specify, in writing, protection (safety) duties for staff officers, subordinate commanders, leaders, and individuals.

(11) Designate, in writing, a Command Safety Council (CSC) and an Enlisted Safety Council (ESC) to be convened a minimum of quarterly for the purpose of reviewing risk-control options, making risk-control-option decisions, and directing implementation of risk-control options. The CSC and ESC may be combined as one council in units with a low density of officer or enlisted personnel, such as detachments, platoons, and facilities. Commanders may consolidate councils (one CSC and one ESC) at no higher than battalion/squadron level.

(12) Conduct safety meetings monthly for active component and full-time reserve component units/facilities and quarterly for all others.

(13) Ensure that a complete aviation accident prevention survey (AAPS) is conducted of all unit functional areas a minimum of semiannually for active component and full-time Reserve component units/facilities and annually for all others.

*b*. *G-3/S-3/operations officers.* G-3/S-3 operations officers will—

(1) Gather METT-T information and complete an aviation accident risk assessment for each course of action (COA).

(2) Include the aviation accident risk in determining the residual risk level of each COA on the decision matrix.

(3) Identify the most severe and most probable hazards for each functional area and develop controls for each hazard.

(4) Implement and monitor control measures selected by the commander.

(5) Manage the risk of new or increased-risk METT-T hazards as they occur during mission execution.

*c. Operations officers.* Operations officers will—

(1) Ensure that all aviators are issued appropriate, current publications for pilotage or navigation purposes.

(2) Ensure that pilots are properly briefed on each mission prior to the planning phase of the mission and monitor aviation safety during mission planning through execution. (A risk assessment is conducted for each mission.)

(3) Monitor each pilot-in-command (PC) mission debrief upon completion of the mission and immediately pass safety breaches, incidents, and potential hazards to the ASO for investigation.

(4) Ensure that a detailed hazard location map covering the entire unit operational area is posted and current.

(5) Monitor the crew endurance program and provide feedback as necessary to meet mission requirements.

(6) Manage the unit reading file, implementing a system that ensures new information is reviewed by crewmembers in a timely manner.

(7) Prepare and maintain the unit pre-accident plan for the commander. The expertise of the ASO and other applicable elements is used in accomplishing this task.

(8) Rehearse, review, and document the adequacy of the unit pre-accident plan. This must be a systematic review and is conducted at least quarterly. The degree of response by elements in the pre-accident plan can vary; however, an exercise requiring all elements to physically respond must be conducted at least annually.

*d. Aviation safety officers.* Aviation safety officers will—

(1) As their primary duty, advise and assist the commander and staff on all safety matters, including--

*(a)* Developing safety policy.

*(b)* Developing safety goals, objectives, and priorities and integrating them into appropriate training guidance based upon identification of the most probable and severe types of accidents expected and the most likely reasons (hazards) for these accidents.

*(c)* Developing corrective actions/control options for command selection.

(2) Monitor the ability of each unit functional area (for example, battlefield operating systems) to protect the force against aviation accidents.

(3) Advise the commander when a below-standard status that affects safety is detected in any functional area.

(4) Advise and assist in developing the commander's training assessment based upon a safety assessment of unit functional areas using diagnostic tools and programs administered or monitored by the ASO. (See chaps 2 and 3.)

(5) Assist the commander and staff in assessing the unit's risk-management effectiveness and safety performance after operations by—

*(a)* Collecting from each staff section information about risk-management successes, shortcomings, and needed improvements.

*(b)* Assisting the commander in determining if the performance met the commander's guidance (goals, objectives, and priorities).

*(c)* Assisting staff officers in implementing corrective actions/controls selected by the commander to improve performance.

(6) Administer or monitor safety-related programs, including—

*(a)* Observing flight and ground operations to detect and correct unsafe practices.

*(b)* Conducting hazard analysis, prioritizing hazards in terms of accident severity and probability, and promptly advising the appropriate officials.

*(c)* Conducting safety meetings monthly for active component and full-time Reserve components/facilities, and quarterly for all others.

*(d)* Reviewing aircraft accident reports and helping to implement corrective measures.

*(e)* Rehearsing, reviewing, and documenting the adequacy of the unit pre-accident plan. This must be a systematic review to be conducted at least quarterly. The degree of response by elements in the pre-accident plan may be varied; however, an exercise requiring all elements to physically respond must be conducted at least annually.

*(f)* Ensuring that air-traffic-control communication equipment, navigational aids, and all other electronic aids to aircraft operations are inspected frequently and regularly.

(*g)* Inspecting semiannually the physical condition of airfields, heliports, helipads, and tactical landing sites for hazards; when deficiencies are noted, recommending abatements and ensuring that all known hazards are publicized.

*(h)* Acquiring and maintaining a current reference library of aviation literature. (see app A.)

*(i)* Maintaining accident-prevention and other appropriate safety literature and posters and making distribution a priority.

*(j)* Reviewing aviator flight records and making appropriate entries as necessary to unit training programs and recommending corrections to any deficiencies noted.

*(k)* Monitoring techniques and proficiency of personnel in handling weapons; ammunition or explosives; petroleum, oil, and lubricants (POL); chemicals; hazardous and toxic materials; and lasers.

*(l)* Observing aviation maintenance operations, making recommendations to correct unsafe procedures and practices, and monitoring the SOF program.

*(m)* Managing the operational hazard report (OHR) program and monitoring the foreign object damage (FOD) prevention program. (See chap 2.)

*(n)* Reviewing results of accident-prevention surveys and other inspection results, bringing noted deficiencies to the immediate attention of the commander and Command Safety Council, and establishing follow-up procedures to correct deficiencies.

*(o)* Monitoring unit aviation life-support equipment (ALSE) and related survival training programs.

*(p)* Monitoring the hazard communication program.

*(q)* Managing the unit's safety award program. This should be done in consonance with the unit administration officer and according to the guidelines contained in AR 672-74.

*e. Army aviator.* The Army aviator is the basic element in the command line of aircraft accident prevention. Minimum aviation duties, in regard to safety, are—

(1) Attaining and maintaining proficiency in all aircraft that the aviator is assigned to pilot.

(2) Maintaining appropriate physical and mental fitness according to applicable Army regulations.

(3) Complying with sound flight principles (aircrew training manuals (ATMs), ARs, FMs, Federal Aviation Regulations (FARs)) and safe practices during all flight operations.

(4) Immediately reporting hazards and unsafe conditions or acts to the proper authority. After initial verbal reporting, providing a DA Form 2696 (Operational Hazard Report) to document the condition and promote follow-up actions as appropriate.

(5) Making on-the-spot corrections of unsafe conditions when appropriate.

*f. Aviation maintenance officer.* The aviation maintenance officer ensures that an effective maintenance program is developed and maintained. The aviation maintenance officer will—

(1) Continuously monitor quality control (QC) through coordination with QC personnel, ensuring that QC personnel complete SF 368 (Product Quality Deficiency Reports) according to established procedures (ARS, TMs, FMs, and so forth).

(2) Ensure adequate training of maintenance personnel; and ensure that a formal continuing education program is available to provide maintenance personnel with current information on techniques, procedures, and modifications.

(3) Ensure proper and timely aircraft inspections.

(4) Ensure adequate program supervision to guarantee that maintenance personnel are aware of, and comply with, all technical directives affecting aircraft operations.

(5) Ensure that discrepancies (write-ups) are properly classified as to status and that they are properly cleared.

(6) Monitor and manage the equipment improvement recommendation (EIR) program and the Army oil analysis program (AOAP).

(7) Provide maintenance personnel with lessons-to-be-learned from accident summaries that cite maintenance as the accident cause factor.

(8) Ensure that maintenance test pilots (Army and contractor) meet the requirements of AR 95-1 and Technical Manual (TM) 55-1500-328-25 to perform maintenance test flights, and ensure maintenance test flights are performed according to appropriate directives.

*g*. *Flight surgeon.* The flight surgeon assists and advises the command in all aviation medical matters. In remote areas where a flight surgeon is not assigned or readily available, local support will be provided by the servicing medical department activity (MEDDAC) to best accomplish these duties. The flight surgeon will—

(1) Maintain liaison within the command to implement the aviation medicine program.

(2) Take part in, and observe, flight operations to monitor the interactions of crewmembers, aircraft, and environment. The flight surgeon exerts maximum effort in observing the flying ability and characteristics of each assigned aviator at least annually.

(3) Serve as a member of aircraft accident investigations board, when directed.

(4) Serve as a member of flight evaluation boards, when directed.

(5) Ensure that the medical portion of the pre-accident plan is adequate.

(6) Monitor the physical and mental health of aviation personnel, including alcohol abuse and self-medication problems, and advise the commander on crew-endurance issues.

(7) Maintain aviation medical records on flight personnel, assist the unit in providing annual occupational health and safety screening for non-crewmember personnel, and ensure that DA Form 4186 (Medical Recommendation for Flying Duty) prepared on flight personnel is accurate and complete prior to being sent to the unit commander for approval.

(8) Monitor the survival and physiological training of aviation crewmembers and provide medical support in accordance with applicable Army regulations.

(9) Medically clear crewmembers for further flight duty after aircraft accidents in accordance with applicable Army regulations.

(10) Make recommendations to the Commander, USASC, for improvement of human factors compatibility, crashworthiness, aviation life-support equipment, and survival features of aircraft.

(11) Take part in aviation safety meetings to educate aviation crewmembers on the aeromedical aspects of flight.

(12) Monitor the ALSE program.

(13) Assist in, and advise on, the hearing and occupational vision program.

(14) Ensure command consideration of preventive and occupational medicine aspects of all plans, operations, training, and security missions.

*h. Senior NCO.* The senior NCO promotes safety within the unit and acts as chairperson for the Enlisted Safety Council.

*i. Aviation safety NCO.* The aviation safety NCO assists, advises, and makes recommendations to the ASO on aviation accident-prevention matters. The aviation safety NCO will—

(1) Maintain liaison with the command sergeant major, first sergeants, and other enlisted personnel on all aviation safety matters.

(2) Observe aircraft support activities (such as POL, maintenance, operations, and enlisted crewmembers' training) to detect and report unsafe practices or procedures.

(3) Act as recorder for the ESC.

(4) Maintain liaison between the ESC and the Command Safety Council.

(5) Post reference files on aviation safety literature for the ASO, keeping the ASO informed of noted changes and new material received, and ensure that all files are current and complete.

(6) Participate in unit safety surveys and inspections.

*j. Unit instructor pilot or flight standardization officer.* The unit instructor pilot or flight standardization officer will—

(1) Administer the aviator standardization or training program for the commander according to AR 95-1, TC 1-210, and appropriate aircraft ATMs and stress that sound safety principles must be adhered to during all standardization or training operations.

(2) Monitor aircrew status, annual proficiency and readiness test (APART), instrument qualification or currency, and advise the commander of deviations.

(3) Actively participate in unit safety meetings and Command Safety Council meetings.

*k. Aircrew.* Each aircrew member is ultimately responsible for ensuring his/her own safety and for expeditiously advising the aviator that an unsafe practice is occurring or is about to occur.

*l. ALSE officer/NCO/technician.* The ALSE officer/NCO/technician will—

(1) Ensure that each aircrew member is equipped with all required items of individual aviation life-support equipment and ensure that each aircraft is equipped with crew life-support equipment (kits or sets) required for the mission and environment.

(2) Ensure that all life-support equipment is maintained, inspected, and replaced in accordance with paragraphs 8-16, 8-17, and 8-18 of AR 95-1.

*m. Individuals.*

(1) Individual unit members are directly responsible for their own safety, both on and off duty.

(2) Each individual has a moral responsibility to advise others about anyone who may, knowingly or unknowingly, be committing, or about to commit, an unsafe act.

## Chapter 2
## Safety Related Programs

### 2-1. Operational hazard reporting

*a. Operational hazard.* An operational hazard is any condition, action, or set of circumstances that compromise the safety of Army aircraft, associated personnel, airfields, or equipment. Operational hazards should be corrected at the lowest level possible. Operational hazards include inadequacies, deficiencies, or unsafe practices pertaining to—

(1) Air traffic control (ATC).

(2) Airways and navigational aids (NAVAIDs).

(3) Controller procedures and techniques.

(4) Near mid-air collisions (NMAC) between aircraft or near collisions between aircraft and other objects in the air or on the ground.

(5) Aircraft operations.

(6) Aircraft maintenance or inspection.

(7) Weather services.

(8) Airfields and heliports facilities or services.

(9) Flight or maintenance training and education.

(10) Regulations, directives, and publications issued by DOD agencies, the Federal Aviation Administration (FAA), the International Civil Aviation Organization, and host nations.

*b. Operational hazard report.*

(1) DA Form 2696 (Operational Hazard Report) RCS CSGPA 1633, is used to record information about hazardous acts or conditions before accidents occur. This form is available on the Army electronic library CD ROM and the USAPA web site. Place blank copies of the report forms in areas where they are readily available to all aviation-related personnel.

(2) The OHR is used to fulfill North Atlantic Treaty Organization (NATO) Standardization Agreement (STANAG) 3750FS- "Airmiss Reporting and Investigation."

(3) The OHR is issued within the DA for accident prevention purposes only. The OHR is NOT used—

*(a)* To report alleged flight violations for punitive action. AR 95-1 provides guidance for processing alleged flight violations.

*(b)* In determining the misconduct or line of duty status of Army personnel.

*(c)* By evaluation boards in determining pecuniary liability.

*(d)* As evidence for disciplinary action.

*c. Submitting hazard reports.*

(1) Any person (military or civilian) may submit an OHR. The signature and address of the individual submitting the OHR are desirable but not mandatory unless the individual wishes to have a copy of the completed report returned. An OHR is not required when an aircraft accident report will be prepared in accordance with AR 385-40 or when a deficiency report (DR) will be submitted according to DA PAM 738-751. Hazards observed in flight will be reported to the nearest radio contact point. An OHR will be prepared and submitted after landing. In the event of an NMAC, an immediate airborne report will be transmitted to the nearest air traffic agency—that is, flight center, flight service station or control tower—and the following information provided:

*(a)* Identification or call sign.

*(b)* Time and location of the occurrence.

*(c)* Altitude or flight level.

*(d)* Description of the other aircraft.

*(e)* An advisory to the controlling agency that a written report (DA Form 2696) will be filed.

(2) The OHR will be used only to report hazards that affect aviation safety. Hazards not pertaining to aviation safety are reported on DA Form 4755 (Employee Report of Alleged Unsafe or Unhealthful Working Conditions) (AR 385-10).

*d. Routing the OHR.*

(1) The OHR will be submitted to an ASO or Army flight operations office. A report sent to an operations office will be promptly forwarded to the organization ASO.

(2) An OHR pertaining to other organizations will be transferred as soon as possible from the ASO receiving the report to the one having official control.

(3) The OHR will be forwarded to the Commander, U.S. Army Safety Center, (CSSC-OA), Fort Rucker, AL 36362-5363, when actions pertain to—

*(a)* The Department of Army staff, MACOMs, or subcommands not in the chain of command.

*(b)* Other DOD armed services, the U.S. Coast Guard, or a host nation.

*(c)* The FAA or National Transportation Safety Board (NTSB) at the national level.

*(d)* Other subject commanders or ASOs believed to be significant.

(4) An OHR pertaining to civilian operations will be routed as follows:

*(a)* In cases involving civil aircraft or civil air traffic control, a copy of the report will be mailed to the FAA Flight Standards District Office (FSDO) in the area of the hazard. The Department of the Army regional representative (DARR) should be contacted for the correct FSDO point of contact. (See fig. B-1.) For MACOMs outside the national airspace system, the report will be forwarded through appropriate coordinating agency.

*(b)* When FAA ATC is involved in the hazard, the report will be mailed to the appropriate DAAR office.

*(c)* When forwarding the correspondence, request that the results of the investigation, including corrective actions taken, be returned to the sender. The correspondence will state that OHR information is used for accident prevention and safety purposes only.

(5) The U.S. Air Force and the U.S. Navy have similar hazard-reporting systems. Army personnel should submit hazard reports directly to the base or station operations office while operating from any of these installations.

(6) A copy of each report pertaining to Army air-traffic-control personnel, services, procedures, and equipment will be forwarded through the respective MACOM to the Director, U.S. Army Aeronautical Services Agency, 9325 Gunston Road, Suite N319, Fort Belvoir, VA 22060-5582.

(7) A copy of the report will be returned to the originator, provided the report includes the originator's name and address.

(8) A copy of each report should remain on file for two years, in case the investigating ASO needs to refer to the information.

*e. Managing OHR functions.*

(1) *Commanders.* Commanders ensure that procedures are established to manage the OHR function, including—

*(a)* Emphasizing the importance of the OHR as a risk-management tool.

*(b)* Promptly reporting and investigating hazards.

*(c)* Promptly correcting hazards.

*(d)* Emphasizing that the OHR and flight violation reports are two separate systems that may be used simultaneously to enhance safety.

*(e)* Forwarding the OHR to the next higher command when recommendations exceed the capabilities of the receiving unit.

*(f)* Reviewing, *signing*, and returning the completed OHR to the ASO within 10 working days of the date the report was received.

(2) *ASOs.* ASOs are responsible for administering OHR management procedures within their organizations, including—

*(a)* Actively promoting the OHR procedure.

*(b)* Maintaining an adequate supply of DA Form 2696 and making forms readily available, normally in flight operations and the maintenance area.

*(c)* Receiving OHRs, analyzing hazards, and recommending control options to the commander.

*(d)* Completing all items in block 11, DA Form 2696.

*(e)* Ensuring that OHRs are promptly forwarded to the commander for *action* and are returned to the ASO within 10 working days of the date the report was received; ensuring that the completed action is returned to the originator within 20 working days of the date the report was received. In the event the action cannot be completed within 20 working days, ensuring that an interim report is returned to the originator with an updated written report provided every 10 working days until the action is completed.

*(f)* Ensuring that OHR forms are prepared for verbally-reported hazards.

*f. Instructions for Completing DA Form 2696 (Operational Hazard Report).* (DA Form 2696 may be typed or handwritten. All copies must be legible.):

(1) *Items 1-7.* Check all applicable blocks and complete required information on the hazard being reported.

(2) *Item 8.* Describe the conditions and circumstances of the hazard and evaluate the risk.

(3) *Item 9*. The appropriate ASO conducts the investigation using the 3W investigation process, including the following information:

*(a)* Results of the examination and analysis of the conditions and circumstances.

*(b)* Reasons why the hazard occurred or was allowed to exist.

*(c)* Recommendations for eliminating, correcting, or controlling the risk.

(4) *Item 10.* Completed by the responsible commander who will correct or control the risk. Commander's signature is required.

(5) *Item 11.* Completed by the ASO investigating the hazard.

**2-2. Prevention of foreign object damage to aircraft.**

*a. Foreign object damage.* FOD is damage to or malfunction of an aircraft caused by an object that is alien to an area or system or is ingested by or lodged in a mechanism of an aircraft. Foreign object damage may cause material damage or it may cause a system or equipment to be unusable, unsafe, or less efficient. Some examples of FOD are ingestion of loose hardware or grass by an engine, flight controls jammed by hardware or tools, and tires cut or propellers or tail rotors damaged by debris on the ramp or taxiway.

*b. Foreign object damage prevention program.*

(1) The objectives of an FOD prevention program are to find and correct potential hazards and to eliminate the causes of FOD. Training, work-site design, discipline, motivation, and follow-up on FOD incidents are key factors of a sound program. All unit personnel will take an active role in FOD prevention. An effective FOD prevention program can enhance combat readiness by saving material, manpower, and money. Therefore, FOD prevention must be an essential part of each unit's aviation accident-prevention program.

(2) The unit FOD prevention program will be in writing and all unit personnel will be familiar with its contents. A sample FOD prevention SOP is in appendix C. Each unit's SOP should be developed and adapted to meet local needs. Foreign object damage prevention countermeasures will be integrated throughout the unit SOP.

(3) A unit FOD control checklist should be developed for use by FOD prevention officer(s), NCO(s), and unit personnel.

*c. Foreign object damage prevention management.*

(1) Unit commanders establish an FOD prevention program tailored to the needs of the unit. Commanders—

*(a)* Appoint an FOD prevention officer/NCO to implement the unit FOD prevention program. This may be an additional duty for any unit officer/NCO other than the ASO/aviation safety noncommissioned officer (ASNCO) or the aviation maintenance officer.

*(b)* Ensure FOD prevention is an integral part of the unit safety program.

*(c)* Ensure FOD prevention is discussed and FOD accidents are reviewed at all unit safety meetings.

*(d)* Ensure all unit personnel are made aware of their responsibilities for FOD prevention.

(2) The FOD prevention officer/NCO—

*(a)* Administers the unit FOD prevention program.

*(b)* Monitors the unit tool accountability program.

*(c)* Delegates specific areas of responsibility (such as a hangar) to appropriate unit personnel.

*(d)* Conducts surveys and documents results (minimum once per month) and inspections of all unit areas to ensure the FOD prevention program is viable and working; notifies the unit ASO of hazards found during surveys for analysis and control option development.

(3) All unit personnel—

*(a)* Take an active role in FOD prevention.

*(b)* Perform all maintenance tasks according to prescribed technical data.

*(c)* Use the “clean-as-you-go” approach to maintenance; make a thorough check of the area after each task is completed.

*(d)* Ensure all aircraft openings, ports, lines, holes, ducts, and so forth, are properly protected to keep foreign objects from accidentally entering.

*(e)* Ensure all tools, hardware, and other equipment are properly accounted for at the end of each maintenance operation; mark tools for ease of accountability.

*(f)* Inspect all equipment prior to use to ensure it will not cause damage. Ensure care is taken when installing any piece of test equipment.

*(g)* Check engine inlet screens for loose, trapped, or broken objects that may produce FOD.

*(h)* Immediately report FOD and potential FOD to the first-line supervisor.

*(i)* Place all residue and objects that may produce FOD in the proper container.

*d*. *Foreign object prevention suggestions and publicity.* All personnel are encouraged to recommend new ways to prevent FOD. Suggestions should be sent to Commander, USASC, ATTN: CSSC-OA, Fort Rucker, AL 36362-5363. Publicity material, promoting FOD control within the unit, may be obtained from Commander, USASC, ATTN: CSSC-SM, Fort Rucker, AL 36362-5363.

## 2-3. Pre-accident planning

*a. Commanders.* Commanders will ensure--

(1) In the event of an Army aircraft accident (A through C and selected Class D), that all crewmembers, and any other personnel who may have contributed to the accident, are promptly moved by medical evacuation assets, (aeromedical or ground ambulance, whichever is fastest and safest), to facilities where physical examinations and blood and urine testing will be accomplished under the provisions of AR 40-8, AR 40-21, AR 40-501, AR 600-105, and DA PAM 385-40. Apparent absence of injury is not a factor in determining how or when to move personnel to medical facilities. The dynamics involved in an aircraft accident may produce injuries that are found only with a detailed medical examination. Post accident flight evaluations will be in accordance with AR 95-1.

(2) The development of detailed, written, pre-accident plans specifying duties, responsibilities, and immediate actions for personnel involved in accident notification procedures, search and rescue, accident investigation, and equipment recovery. The unit operations officer develops and administers the pre-accident plan with the technical assistance of the unit ASO.

*c. Pre-accident plans.* Pre-accident plans will—

(1) Interface with airfield/installation and higher headquarters plans. Units/facilities on non-Army and non-DOD airfields will ensure plans are coordinated with appropriate local authorities to ensure applicable Army and DOD requirements are complied with.

(2) Focus on organized rescue of personnel, protection of property, preservation of the accident scene, and notification of appropriate personnel.

(3) Address both garrison and field/deployment operations.

(4) Address actions for both aviation and ground accidents.

*d. Systematic rehearsal and review of pre-accident plans*.

(1) Pre-accident plans will be systematically rehearsed and reviewed for adequacy quarterly (at a minimum).

(2) Rehearsal of plans will be coordinated in accordance with AR 420-90. Frequent non-tenant user flight crews will be fully knowledgeable of the host installation pre-accident plan.

(3) An example of a unit aviation pre-accident plan is in appendix C.

**2-4. Fire prevention and protection**

Commanders will implement a unit fire prevention and protection program to ensure compliance with AR 420-90; 29 CFR 1910.106, 1910.252, and local directives.

**2-5. Hazard communication**

Commanders will--

a Develop and implement a unit hazard communication (HAZCOM) program to ensure compliance with 29 CFR 1910.1200 and DODI 6050.5 directives.

*a.* Ensure an accurate inventory is maintained of all hazardous chemicals used by unit personnel.

*b*. Ensure material safety data sheets (MSDS) are readily available for and used by personnel handling hazardous chemicals.

*c*. Ensure personnel handling hazardous chemicals receive training as specified by DOD and Federal statute.

*d.* Ensure hazardous chemicals are properly labeled, stored, used, and disposed of.

**2-6. Motor vehicle accident prevention**

Commanders will ensure that the unit motor vehicle accident prevention program is in compliance with AR 385-55, AR 600-55, and local directives.

**2-7. Hearing conservation**

Commanders will--

*a.* Implement a unit hearing conservation program to protect unit personnel from occupational noise hazards and to ensure compliance with AR 40-5 and DA Pam 40-501.

*b.* Designate a hearing conservation officer/NCO to administer the unit program in conjunction with the local preventive medicine office.

**2-8. Respiratory protection**

*a.* Commanders will--

(1) Implement a unit respiratory protection program to protect unit personnel from the hazards of respiratory injury or illness and to ensure compliance with AR 11-34.

(2) Determine if there is a need for respiratory protection in their units and, if necessary, will designate and train an officer/NCO to administer the program in conjunction with the installation respirator specialist and in accordance with AR 11-34.

*b.* The unit respiratory protection program should be an integral part of the unit protective clothing and equipment (PCE) program. The unit ASO/ASNCO should not be designated as the respiratory protection officer/NCO.

**2-9. Radiological protection**
Commanders will--

*a.* Develop and implement a unit radiological protection program to protect unit personnel from the hazards of radiation and to ensure compliance with TB 43-0108; and for laser, AR 40-46 and TB Med 524).

*b.* Determine if a radiological hazard exists and, if necessary, will designate and train a unit representative to administer the program in conjunction with the installation radiological protection officer (RPO).

**2-10. Protective clothing and equipment**

*a.* Commanders will implement a unit protective clothing and equipment (PCE) program.

*b.* Unit ASOs will evaluate requirements for PCE during surveys of unit work sites.

*c.* The PCE program will be administered by unit logistical personnel and monitored by the unit ASO to ensure compliance with AR 385-10.

**2-11. Hazardous materiel handling**

*a.* Commanders will develop and implement a unit hazardous materiel (HAZMAT) handling program.

*b.* The HAZMAT-handling program will be administered by unit logistical personnel and monitored by the unit ASO to ensure compliance with AR 700-141.

*c.* The plan will address procedures for handling advanced composite materials, including precautions to be taken in the vicinity of aircraft accident sites.

**2-12. Aviation maintenance**
Commanders will ensure that unit ASOs monitor the unit aviation maintenance program, including quality control (QC); army oil analysis program (AOAP); equipment improvement recommendation (EIR)/deficiency report (DR); hangar, shop, and work areas; and safety-of-flight messages (SOF)/aviation safety action messages (ASAM), to ensure compliance with the risk reduction controls specified in AR 750-1, FM 1-500, DA PAM 738-751, and TM 1-1500-328-3.

**2-13. Ammunition/explosives/weapons handling**
Commanders will ensure that unit ASOs monitor the unit ammunition/explosives/weapons-handling program to ensure compliance with AR 385-63, AR 385-64, and TM 9-1300-206. The unit ASO/ASNCO should not manage the ammunition/explosives/weapons-handling program.

**2-14. Aviation life support systems**
Aviation commanders will develop and implement a unit aviation life-support-systems (ALSS) program to ensure aircrews are provided with adequate ALSE as prescribed by AR 95-1. Commanders will designate a qualified officer/NCO to manage the unit ALSS program. Unit ASO/ASNCO will monitors, but should not manage, the ALSS program.

**2-15. Environmental protection**

*a.* Commanders will coordinate with installation environmental management office to develop and implement environmental protection plans for unit operations.

*b.* Unit ASOs will monitor the storage, packaging, transportation, treatment, and disposal of solid and hazardous waste by the unit to ensure compliance with AR 200-1. Administration of the unit environmental protection program is a logistical staff function. The program is not a safety staff function; however, the ASO should monitor program activities.

**2-16. Endurance management**

*a.* Commanders will--

(1) Ensure fatigue is controlled or eliminated as a risk factor in all operations.

(2) Implement programs to ensure that personnel operating/servicing military equipment, planning *operations*, and making critical decisions, are alert and not degraded by fatigue. Endurance management programs will, as a minimum—

*(a)* Provide a plan to ensure personnel performing the above duties receive sufficient recuperative sleep time in each 24-hour period.

*(b)* Provide the best possible environment for recuperative sleep that protects the individual from noise, light, and temperature extremes for the entire sleep period.

*(c)* Provide for adjustment of the individual body clock for those personnel changing time zones and those changing day/night work cycles.

*(d)* Provide for periodic command assessment and risk-control decision-making on soldier endurance status and its effect on the current operation or course of action.

*(e)* Be developed based upon human physiological sleep requirements as opposed to individual attitudes. Flight surgeons will assist the commander in program development to meet this requirement.

*b.* Administration of the soldier endurance management program is a leadership function. The unit ASO will assist in developing the program and monitor unit operations to ensure effectiveness of command-directed risk-control options. “A Leader's Guide to Crew Endurance Management” may be obtained from the U.S. Army Safety Center or the U.S. Army Aeromedical Research Laboratory, Fort Rucker, AL.

## Chapter 3
## Unit-level Safety Management Processes

This chapter establishes the policy for the use of certain processes in the management of unit-level safety programs. The school-trained ASO is normally considered the subject-matter expert (SME) in these processes and has the responsibility to advise the commander and staff on their correct application.

**3-1. Hazard analysis and tracking**

See chapter 1 for commander and staff responsibilities involving risk management.

*a.* The primary process used by the ASO to manage the unit safety program is the five-step risk-management model. The ASO uses the risk-management model to assess and develop control options for hazards identified through various other processes such as surveys, job-hazard analyses, OHRs, safety quizzes, and accident reports.

*b.* Hazards should be analyzed with a goal of finding their root causes; hazards should be translated into risk levels or risk-assessment codes (RAC) (low, moderate, high, and extremely high) by prioritizing them in terms of probability of occurrence and severity of impact on the unit mission; tools, such as logic diagrams, matrices, or cause-and-effect diagrams, should be used and promoted to facilitate the hazard analysis.

*c.* This process should be used to develop and recommend to the commander control options that eliminate unnecessary hazards at their root cause or reduce their residual risk to an acceptable level consistent with successful mission accomplishment. Develop controls for those hazards that present the highest risk first. Conduct realism assessments to ensure that controls are fully applicable to the mission in combat or that they are essential for controlling risk in training or other operations. Ensure that implementation of a control measure does not create additional unnecessary risk. The ASO assists in the decision-making process by advising commanders and staff which control options best support mission success and protect unit resources.

*d*. Assist and advise commanders and staff in implementing risk controls by integration into SOPs, policies, and operational plans and orders (OPLAN/OPORD). Ensure that safety is integrated as a task performance standard rather than a separate paragraph, section, or annex.

*e.* Assist and advise commanders and staff to evaluate hazard controls after implementation to ensure their effectiveness and applicability.

*f.* Maintain a file/log of hazards to track control-option implementation and effectiveness. The file/log should be maintained as a permanent reference for future hazard analysis. The file/log should contain the following elements:

(1) A reference or log number.

(2) Description of the hazard, including source or root cause.

(3) Determination of potential impact on the unit/ mission (RAC).

(4) Recommended control options.

(5) Command decision on control options and implementation directives, including responsible agent and suspense.

(6) A plan to verify the effectiveness of controls.

(7) Status based on verification of effectiveness.

*g*. Provide feedback through appropriate channels on hazards that affect other units or Army systems.

### 3-2. Aviation accident prevention survey

*a.* Commanders of all active component aviation units and reserve component aviation support facilities will conduct AAPSs semiannually, at a minimum. Commanders of all other units will conduct AAPSs annually, at a minimum. “Guide to Aviation Resource Management for Aircraft Mishap Prevention” or a similar guide should be used as a reference. When possible, the AAPS should be administered from the battalion/squadron level consolidating the safety staff into a survey team and using supplemental expertise from outside the unit.

*b.* Surveys conducted by external sources (brigade, installation, or MACOM aviation resource management surveys; standard Army safety and occupational health inspections; regional accident prevention surveys) may count toward semiannual accident-prevention surveys, provided all applicable functional areas for the organization are surveyed. An external survey may count toward the annual requirement for Reserve component units. The AAPS may be concurrent with internal command inspection programs as long as all unit functional areas are surveyed.

*c.* The AAPS is a major source in the hazard identification step of the risk-management process. All hazards identified during the AAPS must be thoroughly assessed for their risk level, and control options must be developed for command decision-making and implementation. Hazards found during the AAPS will be tracked through the unit hazard tracking system.

*d*. Files on subordinate unit surveys may be maintained at battalion/squadron level if the subordinate unit commander has immediate access to the files for control option follow-up and research purposes.

**3-3. Standing operating procedures**

Commanders will ensure that an SOP is developed for all unit functional areas and for all aviation operations executed in the command. The SOP may, where applicable, be consolidated at the battalion/squadron or regiment/brigade/group level. The systematic risk management process should be integrated in all unit operational procedures. Command-approved risk-control options should be integrated into the SOP as task performance standards. At a minimum, the following subjects will be addressed in the SOP if they are applicable to the unit mission:

*a*. Terrain flight hazard avoidance.

*b.* Instrument flight and inadvertent instrument meteorological conditions (IMC) procedures.

*c*. Passenger- and troop-carrying operations.

*d.* External and internal cargo operations.

*e.* Gunnery operations.

*f.* Night operations.

*g.* Use and maintenance of night vision devices (NVDs).

*h.* Operations in a tactical environment.

*i.* Parachute operations.

*j.* Infiltration/exfiltration techniques (rappelling, FRIES, SPIES, and so forth).

*k.* Multi-aircraft operations.

*l.* Forward area refueling and rearming.

*m.* Aviation life-support systems (ALSS).

*n.* Aircraft survivability equipment (ASE) use and maintenance.

*o.* Foreign object damage prevention.

*p.* Responsibilities of aircrews when involved in an accident.

*q.* Aircraft maintenance procedures.

*r.* Maintenance shop operations.

*s.* Hazardous material (HAZMAT) handling.

*t.* Hazards communication (HAZCOM) program.

*u.* Aviation mission risk-management process.

*v*. Command-and-control procedures with the ground commander.

*w.* Fatigue/rest-management procedures.

*x.* Extreme environmental operations (blowing snow, desert, over-water, and so forth).

*y.* Protection of equipment from severe weather and environmental hazards.

*z*. Contractor flight operations.

*aa.* Special/unique operations not covered by existing written procedures—that is, external refuel systems, and so forth.

*ab.* Safety program management.

**3-4. Command Safety Council (CSC) and Enlisted Safety Council (ESC)**

*a*. Commanders will designate, in writing, safety councils as risk-management forums that allow leaders to review current or projected hazards, their associated risk, and to make decisions on their elimination or control. Councils will convene a minimum of quarterly regardless of unit status or location.

*b.* The CSC is organized by the ASO, chaired by the commander, and consists of the following unit personnel (if assigned), at a minimum:

(1) Commander.

(2) Operations officer (S-3).

(3) Instructor pilot/standardization instructor pilot (IP/SP).

(4) ASO.

(5) Aviation maintenance officer.

(6) ALSS manager.

(7) Flight surgeon.

(8) Senior unit NCO (1SG/CSM).

(9) Aviation safety NCO (ASNCO).

(10) Other personnel designated by the commander, as required.

*c.* The agenda of each council meeting should, at a minimum, include a review of unit hazard-tracking log and recent accidents, address the effectiveness of risk-control options, and present an opportunity for decision-making on proposed risk-control options for newly identified hazards. The ASO should organize the meeting to allow the commander to select the best course of action (COA) and task the appropriate staff/subordinate commander with control option action. The CSC should focus on tactical and leadership issues that require command visibility and decision-making.

*d*. The ESC is organized by the ASNCO and chaired by the senior NCO (1SG/CSM). The function of the ESC is similar to that of the CSC except the focus is primarily toward soldier safety issues that are more efficiently resolved through NCO leadership. (Consideration should be given to including at least one junior enlisted soldier on the ESC for a “hands-on” perspective of hazards.) The ESC should convene prior to the CSC to allow unresolved issues to be forwarded for command action. The ESC and the CSC may be combined as one council in units with a low density of enlisted or officer personnel at no higher than detachment, facility, or company level. The ESC consists of the following personnel, at a minimum:

(1) Senior NCO.

(2) ASNCO.
(3) Operations NCO.
(4) Maintenance NCO.
(5) ALSS NCO.
(6) Other personnel designated at the commander's discretion.

*e.* Safety councils may be consolidated at no higher than battalion/squadron level. Safety council minutes reflect command decisions on risk-control options. Because of this, council minutes should be very specific in describing the control option, who is responsible for implementing the control option, and the date by which the commander expects action. The commander will approve and sign the council minutes. Wide dissemination of safety council actions should be ensured through safety awareness meetings and by posting minutes to safety bulletin boards.

**3-5. Unit safety training meeting**

*a*. Commanders will conduct safety training meetings at least monthly for active component and full-time reserve component units/facilities and quarterly for all others.

*b*. Safety training meetings should include training and open dialog on aviation and ground hazards affecting the unit. The commander may conduct separate ground and aviation safety meetings as long as all personnel receive training pertinent to their duty positions and off-duty activities.

*c.* Safety meetings should be programmed at least twelve months out and included on the unit training schedule. Commanders will develop a “make-up” system that ensures that personnel not able to attend a safety training meeting will receive the same quality of training as those who attended. If the unit has the equipment available, videotaped meetings are an effective make-up tool.

*d.* Safety training meetings may be consolidated at battalion/squadron or even brigade/group level. However, safety training and dialog is most effective when conducted at the lowest unit level.

**3-6. Safety continuing education**

Management of an effective aviation safety program requires technical skills acquired only through qualification training and continuing education. Commanders support a continuing education program for safety personnel. Place particular emphasis on continuing education provided or endorsed by the U.S. Army, Department of Defense, and/or Department of Labor. Information on U.S. Army safety continuing education may be obtained from the USASC, Fort Rucker, AL.

**3-7. Safety awards**

*a.* Commanders will integrate and budget safety awards into the unit awards program, in accordance with AR 672-74. The unit ASO should manage the safety awards program through coordination with the unit administration officer/NCO.

*b.* Commanders will actively participate in higher headquarters, MACOMs, and Department of the Army safety awards programs.

*c.* Commanders will implement local or unit safety awards programs that recognize individual and unit safe performance and will develop, budget for, and use “impact” awards to quickly recognize individuals or units for specific acts that advance accident prevention.

## Appendix A
## References

### Section I
### Required Publications

**AR 95-1**
Flight Regulations. (Cited in paras 1-4*e*(1), 1-6*e*(8), 1-6*k*(3), and 2-14.)

**AR 385-10**
The Army Safety Program. (Cited in paras 2-1*c*(2) and 2-10.)

**AR 385-40**
Accident Reporting and Records. (Cited in paras 1-6*a*(4)*(d),* 2-1*c*(1); apps C-1*a*(2), C-1*c*(5); and C-1*c*(11).)

**AR 385-55**
Prevention of Motor Vehicle Accidents. (Cited in para 2-6.)

**AR 385-63**
Policies and Procedures for Firing Ammunition for Training, Target Practice, and Combat. (Cited in para 2-13.)

**AR 385-64**
Ammunition and Explosive Safety Standards. (Cited in para 2-13.)

**AR 420-90**
Fire and Emergency Services. (Cited in para 2-4 and app C-1*a*(2).)

**AR 600-55**
The Army Driver and Operator Standardization Program (Selection, Training, Testing, and Licensing). (Cited in para 2-6.)

**AR 672-74**
Army Accident Prevention Awards Program. (Cited in paras 1-6*c*(6)*(q)* , 3-7*a*, app D-4*b*(13).)

**AR 700-141**
Hazardous Material Information System (HMIS) (RCS DD-FM&P (A,Q & AR 1486). (Cited in para 2-11.)

**DA Pam 385-40**
Army Accident Investigation and Reporting. (Cited in paras 1-6*a*(4), 2-3*a*, app C-1*a*(5), C-1*c*(5)*(f)*.)

**FM 25-101**
Battle Focused Training. (Cited in para 1-5*b*.)

**FM 101-5**
Staff Organization and Operations. (Cited in para 1-5*c*.)

**TC 1-210**
Aircrew Training Program Commander's Guide to Individual and Crew Standardization. (Cited in para 1-6*i*(1).)

## Section II
## Related Publications

A related publication is a source of additional information. The user does not have to read it to understand this publication.

**AR 11-34**
The Army Respiratory Protection Program

**AR 25-400-2**
The Modern Army Record Keeping System (MARKS)

**AR 40-5**
Preventive Medicine

**AR 40-8**
Temporary Flying Restrictions Due to Exogenous Factors

**AR 70-62**
Airworthiness Qualification of U.S. Army Aircraft Systems

**AR 75-1**
Malfunctions involving Ammunition and Explosives (RCS CSGLD-1961 (MIN))

**AR 95-2**
Air Traffic Control, Airspace, Airfields, Flight Activities, and Navigational Aids

**AR 95-27**
Operational Procedures for Aircraft carrying Hazardous Materials

**AR 200-1**
Environmental Protection and Enhancement

**AR 350-41**
Training in Units

**AR 360-5**
Public Information

**AR 385-9**
Requirements for Military Lasers.

**AR 500-1**
Aircraft Piracy Emergencies

**AR 500-2**
Search and Rescue (SAR) Operations

**AR 500-3**
Army Survival, Recovery, and Reconstitution System (ASRRS)

**AR 500-4**
Military Assistance to Safety and Traffic (MAST)

**AR 600-8-22**
Military Awards

**AR 700-141**
Hazardous Material Information Systems (HMIS)

**AR 750-1**
Army Material Maintenance Policy and Retail Maintenance Operations

**DA PAM 40-501**
Hearing Conservation

**DA PAM 738-751**
Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A)

**FAR part 91**
General Operating and Flight Rules Air Shipment

**FM 1-100**
Army Aviation Operations

**FM 1-111**
Aviation Brigades

**FM 1-202**
Environmental Flight

**FM 1-300**
Flight Operations Procedures

**FM 1-301**
Aeromedical Training for Flight Personnel

**FM 1-400**
Aviator's Handbook

**FM 1-500**
Army Aviation Maintenance

**FM 1-508**
Maintaining Aviation Life Support Equipment (ALSE): Maintenance Program

**FM 9-43-1**
Maintenance Operations and Procedures

**FM 10-67-1**
Concepts and Equipment of Petroleum Operations

**FM 10-67-2**
Petroleum Laboratory Testing Operations

**FM 100-14**
Risk Management

**TM 38-250**
Preparing Hazardous Materials for Military Air Shipments

**29 CFR 1910**
OSHA Standards

**TM 1-1500-204-23 (Books 1-10)**
General Aircraft Maintenance Practices

**TM 1-1500-250-23**
Aviation Unit and Aviation Intermediate Maintenance for General Tie-down and Mooring on all Series Army Models AH-64, UH-60, CH-47, UH-1, AH-1, OH-58 Helicopters

**TM 5-803-4**
Planning of Army Aviation Facilities

**TB 43-0142**
Safety Inspections and Testing of Lifting Devices

**TB 385-4**
Safety Requirements for Maintenance of Electrical and Electronic Equipment

**TC 5-400**
Unit Leaders' Handbook for Environmental Stewardship

**Section III**
**Prescribed Forms**
DA Form 2696
Operational Hazard Report (Prescribed in para 2-1.)

**Section IV**
**Referenced Forms**

**DA Form 4186**
Medical Recommendation for Flying Duty

**DA Form 4755**
Employee Report of Alleged Unsafe or Unhealthful Working Conditions

**SF Form 368**
Product Quality Deficiency Report

## Appendix B

### FAA/DARR REGIONS


| | |
|---|---|
| **Alaskan** | **FAA Alaskan Region**<br>ATTN: AAL 590 (DARR)<br>222 W. 7th Ave, #14<br>Anchorage, AK 99513-7587 |
| COMM: | (907) 271-5366 |
| FAX: | (907) 276-3998 |
| **Central & Great Lakes** | **FAA Central Region**<br>ATTN: DARR/FAA<br>601 East 12th Street<br>Kansas City, MO 64106-9998 |
| COMM: | (816) 426-5576 |
| FAX: | (816) 426-2798 |
| **Eastern & New England** | **DARR, FAA/New England Region**<br>12 New England Executive Park Burlington, MA 01803-0510 |
| COMM: | (617) 270-2462 |
| FAX: | (617) 273-7269 |
| **Northwest Mountain** | **DARR Northwest Mountain Region**<br>1601 Lind Avenue, SW (ANM-902)<br>Renton, WA 98055-4056 |
| COMM: | (206) 227-2952/55 |
| FAX: | (206) 431-2071 |
| **Southern** | **DARR FAA Southern Region (ASO-902)**<br>PO Box 20636<br>Atlanta, GA 30320 |
| COMM: | (404) 763-7245/46 |
| FAX: | (404) 763-7353 |
| **Southwest** | **DARR Southwest Region**<br>Federal Aviation Administration<br>Fort Worth, TX 76193-0902 |
| COMM: | (817) 624-5902 |
| FAX: | (817) 624-5031 |
| **Western Pacific** | **DARR FAA Western Pacific Region**<br>PO Box 92007 (AWP-920)<br>Worldway Postal Center<br>Los Angeles, CA 90009 |
| COMM: | (213) 297-1163 |
| FAX: | (213) 643-8724/9154 |
| **Pacific** | **Commander, EUSA**<br>ATTN: EACJ-EA-ATC<br>APO SF 96301-0009 |
| COMM: | YOUNGSAN MILITARY-6115 |
| **Europe, Africa and Middle East** | **Commander, USAASDE**<br>APO New York Heidleberg 09102-3162<br>MILITARY ETS 370-6426/8079 |

**Figure 2-1 Army Representatives to the FAA**

## APPENDIX C
## Sample Documents

The following documents are provided as examples that are functional in existing units. There is no intent for these samples to be construed as the standard for all units. Use of these sample documents or compliance with the requirements stated within them is not mandatory unless supported by regulation.

### C-1. Pre-accident plan

*a. General.* The operations officer is responsible for establishing, implementing, and accomplishing the pre-accident plan, including—

(1) Coordinating all personnel.

(2) Familiarizing all unit personnel with the crash alarm system and the provisions of AR 420-90, AR 385-40, and AR 385-95.

(3) Conducting regular (minimum quarterly) documented tests of the plan.

(4) Ensuring air crash search and rescue (ACSR) or local crash grid maps and/or crash grid overlays are distributed and maintained by each activity listed on the primary and secondary crash alarm systems and in all medical ambulances.

(5) Ensuring DA Pam 385-40, AR 420-90, and FM 1-300 are used as guidance.

(6) Ensuring that plans are developed and coordinated to fulfill all Army requirements when operating as a tenant activity on a non-Army or joint use airfield.

*b. Primary crash alarm system.* (Use of a cover sheet should be considered to reflect the immediate actions required of an individual who is notified of an accident.) If informed of a crash, the following procedures will be followed:

(1) *Flight operations.* Flight operations personnel will--

*(a)* Activate the primary crash alarm system and notify all parties in the primary system.

*(b)* Activate the secondary alarm system by informing all parties in the system and specifying an assembly point.

*(c)* Control, direct, coordinate, and dispatch personnel, aircraft, equipment, and convoys to locate or to service crash scene.

*(d)* Establish and control an adequate crash PASS SYSTEM.

*(e)* Monitor requests from the crash area for special or additional assistance or equipment.

*(f)* Serve as the control center for general direction of post-accident activities.

(2) *Air traffic control tower.* Air traffic control tower personnel will--

*(a)* Keep a current ACSR or grid map/overlay conspicuously posted and ensure that all tower personnel are familiar with the map.

*(b)* Activate the primary alarm system, and report when a crash or flight emergency is observed from the tower or reported to it by radio.

*(c)* Radio crash location data to fire-fighting and rescue crews.

*(d)* Alert all traffic to the emergency and grant traffic priority to rescue and search aircraft.

*(e)* Close field to air and ground traffic if necessary.

(3) *Fire station.* Fire station personnel will--

*(a)* Respond immediately to the alarm.

*(b)* Conduct rescue and fire suppression as necessary.

*(c)* Supervise crash area until fire is under control, if applicable, and other hazards are stabilized or until area is safe for entry by authorized personnel.

*(d)* Request additional fire-fighting equipment when necessary because of location or nature.

*(e)* Maintain trained and equipped crash-rescue crew on alert during all flying operations. Crews are located so as to be able to provide immediate response in the event of an aircraft emergency.

*(f)* Train all personnel appropriately. Ensure crash-rescue personnel are trained and equipped to respond to aircraft accidents that may present a hazard due to advanced composite materials. Training should include personal protection measures and stabilization of hazardous materials.

(4) *Ambulance station.* Ambulance station personnel will--

*(a)* Dispatch medical personnel to the crash scene via ambulance or helicopter, whichever permits earliest arrival and evacuation of injured.

*(b)* Periodically train all medical personnel who may be assigned crash or rescue duties. Ensure medical personnel are trained and equipped to respond to aircraft accidents that may present a hazard due to advanced composite materials.

*(c)* Inform ambulance crews of best routes to reach each general area shown on ACSR or grid map/overlay sections.

*(d)* Request additional ambulance and medical assistance when necessary because of crash location or nature.

*(e)* Supervise removal and transportation of injured and provide emergency treatment.

(5) *Helicopter ambulance crew.* Helicopter ambulance crew will --

*(a)* Maintain helicopter ambulance for immediate departure to locate crash. Ensure crews are trained in the rescue and evacuation of aircraft accident victims. Ensure crews are trained and equipped to respond to aircraft accidents that may present a hazard due to advanced composite materials.

*(b)* Rescue personnel from crash and evacuate casualties to the designated medical facility.

*(c)* Radio preliminary report of crash scene to tower or controlling agency to aid ground rescue operation.

*(d)* Provide transportation for medical personnel, crash crews, and medical supplies as directed by the flight surgeon.

(6) *Special crash rescue.* Special crash rescue personnel will--

*(a)* Dispatch rescue team when required.

*(b)* Radio preliminary report of crash circumstances to the tower.

*(c)* Rescue and transport injured persons to specific transfer point where faster transportation to hospital is available. Note: A specially equipped and trained rescue team may be required to meet search and rescue needs under unusual geographic conditions.

*c. Secondary crash alarm system.*

(1) *Airfield or post fire department.* Airfield or post fire department personnel will--

*(a)* Dispatch equipment necessary to support crash fire station.

*(b)* Where crash location or nature indicates need for outside fire extinguishing services, make request directly to appropriate fire departments.

*(c)* Determine the off-post fire stations most proximate to each grid map area, and post telephone numbers on the crash grid map.

*(d)* Supervise the crash site until fire is under control.

(*e*) Direct crash crew training.

(*f*) Advise flight operations when dangerous or hazardous cargo warrants presence of specialist (such as ordnance officer and chemical officer).

(2) *Flight surgeon or his assistant.* Flight surgeon will--

*(a)* Dispatch medical personnel to accident with crash crews, as directed by flight operations.

*(b)* Alert hospital emergency room of crash and prepare medical personnel, facilities, and equipment for accident victims.

*(c)* Supervise and plan periodic training of all medical personnel who may be assigned crash rescue duty.

*(d)* Determine off-airfield medical and ambulance facilities closest to each grid map area, and post telephone numbers on the grid map.

*(e)* Serve on the investigation board, assist in determining causes of accident and injuries, and assist in the selection of accident prevention measures.

(3) *Provost Marshal.* Provost Marshall will--

*(a)* Dispatch security personnel to assembly points as needed to provide adequate security and order at the crash scene and to prevent pilferage of wreckage until relieved by security personnel. Inform security personnel that cooperation with civil authorities should be in accord with The Posse Comitatus Act (18 USC 1385) or the Status of Forces Agreement (SOFA) and the treatment of the crash scene should be in accordance with AR 360-5.

*(b)* Train security personnel on specific duties at aircraft accident scenes. This includes restraint of spectators, crash pass requirements, handling of wreckage, security of classified materials, and safeguarding Government property.

*(c)* Escort crash convoys to accident scene.

*(d)* Ensure that all security control patrols know best routes to all general areas within ACSR or grid map/overlay sections.

*(e)* Determine off-post police departments closest to each grid map area, and post telephone numbers (and radio control data) on the grid map. (*c*)

*(f)* Obtain and supervise nonmilitary guards when there are insufficient security personnel or other military personnel available to guard the accident area.

*(g)* Maintain radio communications with security vehicles as necessary.

(4) *Aviation maintenance officer.* The aviation maintenance officer will--

*(a)* Ensure necessary qualified personnel are available to assist accident investigation board at accident site.

*(b)* Provide the board with an estimated cost of damage (ECOD) (TB 43-0002-3) to assist in determining accident classification.

*(c)* Help the board to recover and identify wreckage and determine the operating conditions of various parts.

*(d)* Provide maintenance history of accident aircraft.

*(e)* Help board to reconstruct aircraft from wreckage.

(5) *ASO.* ASO will--

*(a)* Be thoroughly familiar with AR 385-40 and DA Pam 385-40.

*(b)* Identify an alternate ASO.

*(c)* Assist the operations officer in reviewing this plan and ensuring that participating agencies test it at least once a quarter.

*(d)* Go to the scene of an aircraft accident.

*(e)* Classify the accident based on ECOD from the aviation maintenance officer and injury cost and classification estimates from the medical activity.

*(f)* Take charge of the accident site until the accident investigation board arrives. Additional details related to this responsibility are contained in DA Pam 385-40 and AR 385-40.

*(g)* Keep the ASO in the next higher chain-of-command informed.

*(h)* Make certain that notification IAW AR 385-40 is completed.

*(i)* Act as an advisor to the investigation board and assist its members as necessary.

*(j)* Review aircraft accident reports for the commander before they are forwarded to the reviewing authority, giving particular attention to cause determination and preventive measures.

(6) *Motor officer.* Motor officer will provide ground transportation necessary to transport authorized personnel and equipment to and from the accident scene.

(7) *Army Communications Command element.* Army Communications Command element personnel will--

*(a)* Dispatch photographers to assembly point to report directly to the board president. Additional guidance is in DA Pam 385-40.

*(b)* Provide and maintain communication facilities to implement this plan.

*(c)* Provide multiple telephone hookup system for secondary alarm circuit so that all numbers are dialed simultaneously.

*(d)* Test multiple telephone hookup at least quarterly.

(8) *Public affairs officer.* Public affairs officer will--

*(a)* Dispatch personnel to accident scene to handle local media and news release.

*(b)* Maintain liaison with local news services.

*(c)* Help investigators to identify witnesses and solicit return of wreckage pieces which may have been recovered without authorization.

(9) *Staff Adjutant General.* Staff Adjutant General will--

*(a)* Contact chaplain when necessary.

*(b)* Contact claims officer when necessary.

*(c)* Prepare and transmit casualty report.

*(d)* Designate the staff duty officer responsible for these duties during non-duty hours and ensure contact at (phone number).

*(e)* Dispatch Technical Escort specialists (chemical or ordnance) when crashed aircraft was transporting dangerous or hazardous cargo requiring special handling.

(10) *Facility engineer.* Facility engineer will--

*(a)* Detail a qualified draftsman, equipped to diagram wreckage pattern and accident scene, to assembly point.

*(b)* Provide, upon request from aircraft accident investigation board, personnel and equipment to clear land, move earth, or perform other engineering functions relating to accident investigation.

(11) *Aircraft accident investigation board members*. Aircraft accident investigation board members will--

*(a)* Be notified of crashes by board president or ASO.

*(b)* On notice report to specified assembly point.

*(c)* Take charge of accident site and initiate investigation upon arrival at crash scene after rescue and fire suppression tasks are completed.

*(d)* Conduct the investigation and send the report of the investigation as prescribed by AR 385-40.

(12) *Airfield weather officer.* Airfield weather officer will--

*(a)* Take and issue local weather observation.

*(b)* Determine if additional weather information will be required for investigation purposes. Analysis of the weather conditions occurring at the time and place of accident is essential to the accident investigation. The weather unit must be properly advised of an aircraft accident or emergency to ensure the best possible weather conditions can be determined at that time.

(13) *The aviation officer.* The aviation officer will—

*(a)* Not be on the secondary alarm system but will be informed promptly after the secondary alarm system is implemented.

*(b)* Go to the accident scene when appropriate.

*(c)* Arrange for appointment of a board if the organization that has the accident does not have appointing authority.

**C-2. Sample FOD Prevention SOP**

*a. Unit FOD prevention meetings.* The FOD Control Officer chairs the meeting; the ASO attends the meeting. One representative from each flight section/detachment attends. Either the maintenance officer or maintenance NCO also attends the unit FOD prevention meetings. Results of the FOD prevention surveys and the unit FOD control status are discussed at the end of each scheduled safety meeting.

*b. Managing the FOD program.* All subordinate commands and units will develop a tailored FOD prevention program. The minimum requirements to be included in subordinate programs are—

(1) Evaluating FOD trends to find areas that need managing.

(2) Reviewing accident reports to determine types of FOD and prevention measures.

(3) Setting up an active FOD exchange-of-information program and providing pertinent information to parallel and subordinate units.

(4) Ensuring that FOD prevention is made an area of interest during visits by maintenance or safety assistance teams.

(5) Ensuring that FOD prevention is stressed within the unit and personnel are adequately trained at the operating unit level.

(6) Assigning specific areas of responsibility (such as a hangar, shop, parking area, run-up area, wash rack, and ramp) to appropriate unit personnel. Responsible individuals will conduct and document frequent inspections to ensure the unit FOD program is viable and working.

(7) Related tasks for all personnel, including—

*(a)* Performing maintenance tasks according to technical data.

*(b)* Ensuring that aircraft openings, ports, lines, hoses, and ducts are properly plugged or capped to keep foreign objects from entering critical aircraft openings.

*(c)* Ensuring that all tools, equipment, and hardware are accounted for at the end of each maintenance task.

*(d)* Using care when placing test equipment.

*(e)* Inspecting equipment before use to make sure it does not cause FOD.

*(f)* Checking engine inlet screens for loose or trapped objects and for broken wires before and after each installation.

*(g)* Reporting FOD and potential FOD that cannot be promptly corrected to immediate supervisor.

*(h)* Keeping all working areas clean and free of debris.

*(i)* Thoroughly checking the work area after each task is completed.

*(j)* Placing all hardware residue in containers and placing stands and equipment in their assigned storage areas.

*(k)* Keeping areas free of litter and picking up litter when seen during task performance.

(8) Using magnetic or mechanic vacuum sweepers (when available) for aircraft parking ramps, taxiways, runways, run-up areas, and other areas vulnerable to FOD.

*c. Responsibilities.* Specific responsibilities in regard to the FOD prevention operating procedures.

(1) *Commander.* Commander will--

(a) Appoint an officer (other than the ASO or aviation maintenance officer), on orders, at unit level to be responsible for implementing the FOD prevention program.

(b) Ensure units, sections, and detachments check their areas of responsibility at least once a day.

(c) Periodically inspect and supervise the FOD prevention program.

(d) Establish an FOD-reporting procedure to battalion level or higher and take corrective action where FOD potentials and trends exist.

(e) Ensure all incoming personnel are briefed on their responsibility for FOD prevention.

(f) Ensure supported non-aviation personnel are briefed on the importance of FOD prevention.

(g) Provide adequate FOD containers throughout maintenance and flight line areas.

(2) *ASO.* ASO will--

(a) Continuously monitor and survey the command FOD prevention effort.

(b) Ensure all safety meetings address FOD prevention.

(3) *Aviation Maintenance Officer.* The aviation maintenance officer will--

(a) Incorporate FOD prevention in all maintenance training.

(b) Ensure individual maintenance areas are cleaned at least once during the day. Recommend appropriate corrective measures where warranted by adverse conditions or trends, hazardous procedures, or other inadequacies of FOD prevention effort.

(c) Ensure the immediate area of an aircraft is cleaned after maintenance to ensure all debris (such as safety wire, paper and rags) is picked up.

(d) Ensure supervisors complete the following pr*actices* at the end of each workday:

1. Account for tools and inventory tool boxes after each maintenance operation.
2. Turn in special tools.
3. Cap all oil and fuel lines.
4. Dispose of used cans of lubricants.
5. Place covers or caps over those items susceptible to FOD.

(4) *FOD officer/NCO.* FOD officer/NCO will--

(a) Check parking ramps, taxiways, and engine run-up areas and other maintenance and storage areas for cleanliness and condition of surface. Records of these checks, listing deficiencies noted and corrective action taken, will be forwarded to the ASO for trend analysis and hazard tracking.

(b) With the airfield operations officer, ensure active runways and taxi areas are checked daily for debris and surface conditions.

(c) Check mechanical sweeping operation to make sure it is effective.

(d) Check ramps of paved airfields or heliports daily to ensure foreign objects are not being carried onto the flight line by vehicles.

*(e)* Inspect pavement cracks and expansion joints for debris the mechanical sweeper has missed. Advise commander when cleaning by hand is needed.

*(f)* Advise the commander when mechanical sweepers are not used.

*(g)* With the local facility engineer, ensure construction personnel are advised about FOD prevention when working in aircraft maintenance parking and operational areas.

*(h)* Check for debris pickup.

*(i)* Ensure there are FOD containers in the area and they are periodically emptied. FOD containers on the flight line should be marked appropriately with HI-VIS tape, secured, and have a lid.

*(j)* Spot-check general housekeeping in work areas.

*(k)* Observe people at work on FOD prevention.

*(l)* Spot-check to see that open aircraft, engine, and fluid lines are secured with proper plugs or caps to prevent foreign objects from entering.

*(m)* Check engine run-up areas for cleanliness.

*(n)* Discuss the FOD program with supervisors.

*(o)* Observe personnel at work around aircraft with engines running for safe practices.

*(p)* Spot-check personnel during aircraft intake and exhaust inspections for proper clothing and loose personal items.

*(q)* Check corrections from previous FOD accident reports.

*(r)* Review FOD reports for trends.

*(s)* Review unit FOD training programs. Provide help where needed.

*(t)* With flight operations, ensure crews are briefed on potential and actual crew-caused FOD.

*(u)* Check for compliance with this SOP and local supporting plans on FOD.

## Appendix D
## Management Control Evaluation Checklist

### D-1. Function

The function covered by this checklist is the administration of the management control process.

### D-2. Purpose.

The purpose of this checklist is to assist unit managers and management control administrators (MCAs) in evaluating the key management controls outlined below. It is not intended to cover all controls.

**D-3. Instructions.**
Answers must be based on actual testing of key management controls (that is, document analysis, direct observation, sampling , simulation, and other). Answers that indicate deficiencies must be explained and corrective action indicated in supporting documentation. These key management controls must be evaluated at least once every five years. Certification that this evaluation has been conducted must be accomplished on DA Form 11-2-R (Management Control Evaluation Certification Statement). A copy of DA Form 11-2-R is available on the Army electronic library CD-Rom (EM0001) and on the USAPA website. (www.usapa.army.mil)

**D-4. Test Questions.**

*a. HQDA only.*

(1) Does the proponent have the authority to approve exceptions to this regulation that are consistent with controlling law and regulation?

(2) Does the regulation provide responsibilities, policies, and duties for the integration of aviation safety risk management into existing command processes.

*b. Users.*

(1) Are commanders responsible for effectively managing risk to minimize the accidental loss of aviation personnel and equipment?

(2) Do commanders apply risk management procedures in each phase of the training management cycle to identify hazardous conditions and correct shortcomings responsible for those conditions?

(3) Are commanders in compliance with Department of Defense (DOD), Department of the Army (DA), Occupational Safety and Health Administration (OSHA), National Fire Protection Association (NFPA), and Environmental Protection Agency (EPA) requirements?

(4) Are commanders ensuring that risk management procedures are integrated into the decision-making process to identify and control hazards during the execution phase of training and operational missions?

(5) Are commanders ensuring that the unit's risk management and safety performance is systematically observed and assessed during training and operations?

(6) Are safety meetings conducted monthly for active component and full-time reserve component units/facilities and quarterly for all others?

(7) Is a complete Aviation Accident Prevention Survey (AAPS) conducted of all functional areas a minimum of semiannually for active component and full-time reserve component units/facilities and annually for all others?

(8) Does the aviation safety officer (ASO) advise and assist the commander and staff on all aviation safety matters?

(9) Is DA Form 2696 used to record information about hazardous acts or conditions before accidents occur?

(10) Is the unit foreign object damage (FOD) program in writing and are all unit personnel familiar with its contents?

(11) Have unit commanders established FOD prevention program tailored to the needs of the unit?

(12) Have unit commanders ensured development of detailed, written pre-accident plans that specify duties, responsibilities, and immediate actions for personnel involved in accident notification procedures, search and rescue, accident investigation, and equipment recovery?

(13) Has the commander integrated safety awards into the unit award program in accordance with AR 672-74?

**D-5. Comments.**

Help to make this a better tool for evaluation management controls. Submit comments to HQDA, DCSOPS, ATTN: DAMO-FDV, 400 Army Pentagon, Washington, DC 20310-0400.

## Glossary

### Section I
### Abbreviations

**AAPS**
aircraft accident prevention survey

**ALSE**
aviation life support equipment

**ALSS**
aviation life support systems

**AOAP**
Army Oil Analysis Program

**AR**
Army Regulation

**ASA(I&E)**
Assistant Secretary of the Army (Installations and Environment)

**ASA(FM&C)**
Assistant Secretary of the Army (Financial Management and Comptroller)

**ASNCO**
aviation safety noncommissioned officer

**ASO**
aviation safety officer

**ATC**
Air traffic control

**ATM**
aircrew training manual

**CP**
co-pilot

**CSC**
Command Safety Council

**DA**
Department of the Army

**DARR**
Department of the Army regional representative

**DASAF**
Director of Army Safety

**DOD**
Department of Defense

**DR**
deficiency report

**ECOD**
estimated cost of damage

**EIR**
equipment improvement recommendation

**ESC**
Enlisted Safety Council

**FAA**
Federal Aviation Administration

**FAR**
Federal Aviation Regulation

**FM**
field manual/financial management

**FOD**
foreign object damage

**FSDO**
Flight Standards District Office

**HQDA**
Headquarters, Department of the Army

**IP**
instructor pilot

**MACOM**
major army command

**MARKS**
Modern Army Record Keeping System

**MAST**
military assistance to safety and traffic

**MEDDAC**
medical department activity

**NATO**
North Atlantic Treaty Organization

**NAVAIDS**
navigational aids

**NCO**
noncommissioned officer

**NFPA**
National Fire Protection Association

**NMAC**
near mid-air collision

**NVD**
night vision devices

**OHR**
operational hazard report

**OSHA**
Occupational Safety and Health Act/Administration

**PC**
Pilot-in-command

**PCE**
protective clothing and equipment

**POL**
petroleum, oil, and lubricants

**QC**
quality control

**SAR**
search and rescue

**SOFA**
Status of Forces Agreement

**SOP**
standing operating procedure

**SP/SIP**
standardization instructor pilot

**STANAG**
standardization agreement

**TAMMS**
The Army Maintenance Management System

**TDA**
table of distribution and allowances

**TM**
technical manual

**TOE**
table of organization and equipment

**USASC**
United States Army Safety Center

## Section II
## Terms

**Aircrew training manual (ATM)**
An Army publication that contains training requirements for Army flight crewmembers and programs for qualification, refresher, mission, and continuation training in support of the aircrew training program.

**Aviation Accident Prevention Program**
Established procedures designed for commanders who control aviation assets which will safeguard and preserve human life and United States property.

**Aviation life support equipment**
Equipment designed to provide for the maximum functional capability of flying personnel appropriate for the mission, terrain, and climatic conditions along the planned route of flight. In the event of an accident, the equipment provides a means to enhance safe and reliable escape, survival, and recovery in combat and emergency situations. Use of this equipment will be in accordance with AR 95-1, FM 1-302 and FM 1-508-1.

**Aviation safety officer**
An Army officer, Department of the Army civilian or contractor with a skill qualification of safety and designated by the commander for the purpose of managing the commander's aviation accident prevention program. This officer should have no other duties not related to safety.

**Commander**
For this regulation, the term commander applies to the individual responsible for the personnel and equipment of a military unit or facility. In some cases, this may be the facility supervisor or manager.

**Soldier endurance**
Also referred to as crew rest/crew endurance/fighter management. A program designed by the unit commander and tailored to the unit mission to prevent fatigue from becoming a risk factor in aviation operations.

**Flight safety technician**
A Government employee (civil service) who is school trained and qualified in the skills required to manage an aviation accident prevention program.

**Flight surgeon**
A medical officer who has graduated from the U.S. Army Aeromedical Center (USAAC) Aviation Medicine Course. Graduates from other military courses in aviation medicine must receive USAAC approval. References to flight surgeons include USAAC trained aeromedical physicians' assistants.

**Foreign object damage**
Any damage to, or malfunction of, an aircraft caused by some alien material.

**Instructor pilot**
An aviator with a skill qualification to conduct training and evaluation of pilots and unit trainers in designated aircraft and to promote safety among aviators. Training and evaluation include aircraft operation, qualification, unit tactical employment, visual and instrument flight, and crew performance.

**Instrument flight procedures**
Flight of the aircraft by sole reference to the flight instruments. This may be performed under actual or simulated instrument meteorological conditions. Instrument flight rules govern the procedure.

**Mission**
Flight or series of flights (sorties), conducted to accomplish a specific task or series of tasks in support of the unit's approved mission statement. Each mission is assigned to a designated pilot in command (PC) and or Air Mission Commander (AMC).

**Near mid-air collision**
A near midair collision has occurred when, in the opinion of the pilot in command, the safety of an airborne aircraft was jeopardized by the hazardous proximity of another airborne aircraft, not a member of the same flight. The following criteria are used to determine hazardous proximity:

*a.* Collision avoidance was due to chance rather than an act on the part of either pilot.

*b.* A collision would have resulted if no action had been taken by either pilot.

*c.* A situation involving an estimated distance of less than 500 feet.

**Night operations**
Flights which occur between the period of sunset to sunrise. Because of reduced visual cues, flights at night require the aviator to use different techniques to determine relative position and speed, to include an increased reliance upon flight instruments. The use of night vision devices requires different flight techniques than those used during daylight operations.

**Safety council**
A membership of selected personnel from the unit designated, in writing, by the unit commander for the purpose of advising the commander on the status of safety within the unit and to recommend control options for improving safety. The council will meet on a regular basis as specified by AR and the commander. In aviation units safety councils are specified as Command Safety Council or Enlisted Safety Council.

**Standardization instructor pilot**
A qualified instructor pilot designated by the unit commander, in writing, to train and evaluate instructor pilots, unit trainers, pilots, and other standardization instructor pilots.
Tactical field operations

*a.* Actual. An active theater or area of combat operations.

*b.* Simulated. An operational area established for training in which combat operations are simulated.

**Terrain flight operations**
Flight of the aircraft which is generally carried out above obstacles, but at an altitude where detection by threat forces is minimized or avoided. Flight modes include low level, contour and nap-of-the-earth.

**INDEX**

This index is organized alphabetically by topic and sub-topic.Topics and sub-topics are identified by paragraph number.